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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/721,384

11/26/2003

Hien Boon Tan

Q73159

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7590

11/08/2005

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EXAMINER

WILLIAMS, ALEXANDER O

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/721,384

Applicant(s)

TAN ET AL.

Examiner

Alexander O. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 2-5, 8-12 and 14-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 6, 7 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Serial Number: 10/721384 Attorney's Docket #: Q73159

Filing Date: 11/26/2003;

Applicant: Tan et al.

Examiner: Alexander Williams

Applicant's Amendment filed 9/14/05 to the Amendment/Election with traverse of Species I of figure 2 (device claims 1, 6, 7, and 13) filed 1/28/05 is acknowledged.

Applicant's arguments have been considered. Applicant's election of Species 1 (figures 2 and 8, claims 1, 6, 7 and 13) will be examined.

This application contains claims 2-5, 8-12 and 14-25 drawn to an invention non-elected with traverse. A complete response to the final rejection must include cancellation of non-elected claims or other appropriate action (see 37 CFR § 1.144 & MPEP § 821.01).

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 6, 7 and 13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Ference et al. (U.S. Patent # 6,265,771 B1).

1. Ference et al. (figures 1 to 9) specifically figure 9 show an integrated circuit package comprising: a) a plurality of leads **32** each having a first face and a second face opposite to said first face; b) a die pad **26'** having a first face and a second face opposite to said first face, wherein said second face of said die pad is orthogonally offset from said second face of said leads, such that said second face of said die pad and said second face of said leads are not coplanar; c) an integrated circuit chip **16,12** substantially laterally disposed between said plurality of leads and having a first face and a second face opposite to said first face, whereby said first face of said integrated circuit chip is proximate to said second face of said die pad and is coupled to said second face of said die pad; and d) a plurality of wires **28,28"** linking said plurality of leads to said integrated circuit chip, each of said plurality of wires comprising: a first end electrically conductively joined to said first face of said IC chip, wherein said first end is disposed between a first plane defined by said second face of said die pad and a second plane defined by said first face of said integrated circuit chip, and a second end electrically conductively joined to said first face of one of said plurality of leads, wherein said second end is disposed between a third plane defined by said first face of said die pad and a fourth plane defined by said first face of one of said plurality of leads, and wherein the area of said first face of said die pad in said third plane is larger than the area of said second face in said first plane.

6. The integrated circuit package according to claim 1, Ference et al. show wherein said plurality of leads and said die pad are composed of a common copper alloy.

7. The integrated circuit package according to claim 1, Ference et al. show wherein said plurality of wires are composed of one of a group comprising: gold, gold with some level of impurities, aluminum, and copper.

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13. The integrated circuit package according to claim 1, Ference et al. show wherein: said plurality of leads and said die pad are formed from a leadframe, said leadframe comprising: an outer frame supporting said plurality of leads extending substantially inward from said outer frame, and a plurality of tie bars securing said outer frame to said die pad, substantially centrally disposed within said outer frame; and wherein each of said plurality of tie bars includes a mechanical depression, such that an offset is created between said die pad and said plurality of leads.

Claims 1, 6, 7 and 13 are rejected under 35 U.S.C. § 102(b) as being anticipated by Mostafazadeh et al. (U.S. Patent # 5,705,851).

1. Mostafazadeh et al. (figures 1 to 7) specifically figure 6 show an integrated circuit package comprising: a) a plurality of leads **42** each having a first face and a second face opposite to said first face; b) a die pad **54** having a first face and a second face opposite to said first face, wherein said second face of said die pad is orthogonally offset from said second face of said leads, such that said second face of said die pad and said second face of said leads are not coplanar; c) an integrated circuit chip **34** substantially laterally disposed between said plurality of leads and having a first face and a second face opposite to said first face, whereby said first face of said integrated circuit chip is proximate to said second face of said die pad and is coupled to said second face of said die pad; and d) a plurality of wires **48** linking said plurality of leads to said integrated circuit chip, each of said plurality of wires comprising: a first end electrically conductively joined to said first face of said IC chip, wherein said first end is disposed between a first plane defined by said second face of said die pad and a second plane defined by said first face of said integrated circuit chip, and a second end electrically conductively joined to said first face of one of said plurality of leads, wherein said second end is disposed between a third plane defined by said first face of said die pad and a fourth plane defined by said first face of one of said plurality of leads, and wherein the area of said first face of said die pad in said third plane is larger than the area of said second face in said first plane.

6. The integrated circuit package according to claim 1, Mostafazadeh et al. show wherein said plurality of leads and said die pad are composed of a common copper alloy.

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7. The integrated circuit package according to claim 1, Mostafazadeh et al. show wherein said plurality of wires are composed of one of a group comprising: gold, gold with some level of impurities, aluminum, and copper.

13. The integrated circuit package according to claim 1, Mostafazadeh et al. show wherein: said plurality of leads and said die pad are formed from a leadframe, said leadframe comprising: an outer frame supporting said plurality of leads extending substantially inward from said outer frame, and a plurality of tie bars securing said outer frame to said die pad, substantially centrally disposed within said outer frame; and wherein each of said plurality of tie bars includes a mechanical depression, such that an offset is created between said die pad and said plurality of leads.

Response

Applicant's arguments filed 9/14/05 have been fully considered, but are moot in view of the new grounds of rejections detailed above.

The insertion of Applicant's additional claimed language, for example, "in claim 1" cause for further search and consideration to make this action final.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY

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PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE
OF THIS FINAL ACTION.

The listed references are cited as of interest to this application, but not applied at this time.

Field of Search	Date
U.S. Class and subclass: 257/684,796,712,713,717,720,690,777,782,783,784,786,7 88,676,675,666,696,698	4/17/05
Other Documentation: foreign patents and literature in 257/684,796,712,713,717,720,690,777,782,783,784,786,7 88,676,675,666,696,698	4/17/05
Electronic data base(s): U.S. Patents EAST	4/17/05

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander O. Williams whose telephone number is (571) 272 1924. The examiner can normally be reached on M-F 6:30-7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272 1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alexander O Williams
Primary Examiner
Art Unit 2826

AOW
11/3/05